

EXAMINER'S AMENDMENT / COMMENT

Examiner's Amendment

Examiner's amendment to the record appears below. Should the changes be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be filed no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephonic interview with Myunggon Hong, Reg. No. 65,034 on May 21, 2010.

In the claims:

Claims 1, 17, 23, 33, 38-42, 45-48, and 81 are currently amended.

Claims 1-6, 9-12, 17, 22-26, 29-33, 38-42, 45-48, 81, 84, and 85 remain in the application.

1. (Currently Amended) A system, comprising:
 - a local area network management system ~~to manage and configure~~ managing and configuring a network of routers;
 - a wide area network management system ~~to manage and configure~~ managing and configuring a network of switches, the wide area network management system separate from the local area network management system; and
 - address registration information ~~to be~~ appended to a message sent between a router of the network of routers and a switch of the network of switches over a connection between the router and the switch, wherein the local area network management system uses the address registration information in mapping the network of switches by accessing each switch in the network of switches, wherein the mapping by the local area network management system of the network of switches comprises:
 - acquiring the address registration information from the router when the message is received at the router from the switch;
 - accessing a management information base (MIB) associated with the switch using the address registration information;
 - accessing other MIBs, each of the other MIBs associated with one of other switches of the network of switches, using the MIB associated with the switch from which the message is sent; and
 - building a map of entire switches of the network of switches based upon accessing each of the other switches;

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wherein the local area network management system configures the network of switches when the map of entire switches of the network of switches is built from the local area network management system.

2. (Original) The system of claim 1, wherein the address registration information comprises an interface index.
3. (Previously Presented) The system of claim 2, wherein the interface index comprises a slot number from which the message was sent.
4. (Previously Presented) The system of claim 2, wherein the interface index comprises a port number from which the message was sent.
5. (Original) The system of claim 1, wherein the address registration information comprises an Internet Protocol address.
6. (Previously Presented) The system of claim 1, wherein the address registration information is sent in a data packet, wherein the data packet comprises spare bytes.
7. (Canceled).
8. (Canceled).
9. (Previously Presented) The system of claim 1, wherein the message is an enhanced local management interface message.
10. (Previously Presented) The system of claim 1, wherein the message is sent when the network of switches and the network of routers are first configured.

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11. (Previously Presented) The system of claim 1, wherein the message is sent when the network of switches or the network of routers has a change in configuration.

12. (Previously Presented) The system of claim 1, wherein the message is sent at a regular interval.

13-16. (Canceled).

17. (Currently Amended) A computer-implemented method, comprising:
appending address registration information to a message;
sending the message between a router of a router network and a switch of a switch network, the router network controlled by a local area network management system and the switch network controlled by a wide area network management system separate from the local area network management system; and

mapping, using the address registration information, the router network from the wide area network management system, by accessing each router in the router network, wherein the mapping comprises:

acquiring the address registration information from the switch when the message is received at the switch from the router;

accessing a management information base (MIB) associated with the router using the address registration information;

accessing other MIBs, each of the other MIBs associated with one of other routers of the router network, using the MIB associated with the router from which the message is sent; and

building a map of entire routers of the router network based upon accessing each of the other routers; and

configuring the router network using the wide area network management system when the map of entire routers of the router network is built from the wide area network management system.

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18-21. (Canceled).

22. (Original) The method of claim 17, wherein the address registration information comprises an Internet Protocol address.

23. (Currently Amended) The method of claim 17, wherein the address registration information comprises an interface ~~network~~ index.

24. (Previously Presented) The method of claim 23, wherein the interface index comprises a slot number from which the message was sent.

25. (Previously Presented) The method of claim 23, wherein the interface index comprises a port number from which the message was sent.

26. (Previously Presented) The method of claim 17, wherein the address registration information is sent in a data packet, wherein the data packet comprises spare bytes.

27. (Canceled).

28. (Canceled).

29. (Previously Presented) The method of claim 17, wherein the message is an enhanced local management interface message.

30. (Previously Presented) The method of claim 17, wherein the message is sent when the network of switches and the network of routers are first configured.

31. (Previously Presented) The method of claim 17, wherein the message is sent when the network of switches or the network of routers has a change in configuration.

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32. (Previously Presented) The method of claim 17, wherein the message is sent at a regular interval.

33. (Currently Amended) A machine-readable ~~tangible~~ non-transitory storage medium ~~tangibly embodying~~ storing a sequence of instructions executable by the machine to perform operations comprising:

- appending address registration information to a message;

- sending the message between a router of a router network and a switch of a switch network, the router network controlled by a local area network management system and the switch network controlled by a wide area network management system separate from the local area network management system; ~~and~~

- mapping, using the address registration information, the router network at the wide area network management system by accessing each router in the router network, wherein the mapping comprises:

 - acquiring the address registration information from the switch when the message is received at the switch from the router;

 - accessing a management information base (MIB) associated with the router using the address registration information;

 - accessing other MIBs, each of the other MIBs associated with one of other routers of the router network, using the MIB associated with the router from which the message is sent; and

 - building a map of entire routers of the router network based upon accessing each of the other routers; and

 - configuring the router network using the wide area network management system when the map of entire routers of the router network is built from the wide area network management system.

34-37. (Canceled).

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38. (Currently Amended) The machine-readable ~~tangible~~ non-transitory storage medium of claim 33, wherein the address registration information comprises an Internet Protocol address.

39. (Currently Amended) The machine-readable ~~tangible~~ non-transitory storage medium of claim 33, wherein the address registration information comprises an interface index.

40. (Currently Amended) The machine-readable ~~tangible~~ non-transitory storage medium of claim 39, wherein the interface index comprises a slot number from which the message was sent.

41. (Currently Amended) The machine-readable ~~tangible~~ non-transitory storage medium of claim 39, wherein the interface index comprises a port number from which the message was sent.

42. (Currently Amended) The machine-readable ~~tangible~~ non-transitory storage medium of claim 33, wherein the address registration information is sent in a data packet, wherein the data packet comprises spare bytes.

43. (Canceled).

44. (Canceled).

45. (Currently Amended) The machine-readable ~~tangible~~ non-transitory storage medium of claim 33, wherein the message is an enhanced local management interface message.

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46. (Currently Amended) The machine-readable ~~tangible~~ non-transitory storage medium of claim 33, wherein the message is sent when the network of switches and the network of routers are first configured.

47. (Currently Amended) The machine-readable ~~tangible~~ non-transitory storage medium of claim 33, wherein the message is sent when the network of switches or the network of routers has a change in configuration.

48. (Currently Amended) The machine-readable ~~tangible~~ non-transitory storage medium of claim 33, wherein the message is sent at a regular interval.

49-80. (Canceled)

81. (Currently Amended) A computer-implemented method, comprising:
appending address registration information to a message;
sending the message between a router of a router network and a switch of a switch network, the router network controlled by a local area network management system and the switch network controlled by a wide area network management system separate from the local area network management system;
mapping, using the address registration information, the router network from the wide area network management system by accessing each router in the router network, when the message is received at the switch from the router, wherein the mapping the router network from the wide area network management system comprises:
acquiring the address registration information from the switch when the message is received at the switch from the router;
accessing a management information base (MIB) associated with the router using the address registration information;
accessing other MIBs, each of the other MIBs associated with one of other routers of the router network, using the MIB associated with the router from which the message is sent; and

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building a map of entire routers of the router network based upon
accessing each of the other routers;
configuring the router network using the wide area network management system
when the map of entire routers of the router network is built from the wide area network
management system;

mapping, using the address registration information, the switch network at the
local area network management system by accessing each switch in the switch
network, ~~when the message is received at the router from the switch~~, wherein the
mapping the switch network from the local area network management system
comprises:

acquiring the address registration information from the router when the
message is received at the router from the switch;

accessing a management information base (MIB) associated with the
switch using the address registration information;

accessing other MIBs each associated with one of other switches of the
switch network, using the MIB associated with the switch from which the
message is sent; and

building a map of entire switches of the switch network based upon
accessing each of the other switches; and
configuring the switch network using the local area network management system
when the map of entire switches of the switch network is built from the local area
network management system.

82. (Canceled).

83. (Canceled).

84. (Previously Presented) The system of claim 1, wherein the switch is to send the
message to the router before the switch receives a request for the address registration
information from the router.

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85. (Previously Presented) The method of claim 17, wherein the router is to send the message to the switch before the router receives a request for the address registration information from the switch.

Allowed Claims

Claims 1-6, 9-12, 17, 22-26, 29-33, 38-42, 45-48, 81, 84, and 85 are allowed.

Reasons for Allowance

The following is an examiner's statement of reasons for allowance:

none of the qualifying prior art references of record, taken alone or in combination, disclose or reasonably suggest: a combination of elements as claimed in independent claims 1, 17, 33, and 81, wherein mapping by the local area network management system (or the wide area network management system) comprises among other things, the step of accessing other MIBs, each of the other MIBs associated with one of other switches (or routers) of the network of switches (or routers), using the MIB associated with the switch (or router) from which the message is sent, wherein the local area network management system (or the wide area network management system) configures the network of switches (or routers) when the map of entire switches (or routers) of the network of switches (or routers) is built from the local area network management system (or the wide area network management system).

Applicants argued in the Remarks dated 02/08/10 at page 18 as filed, that "*ATM Device A*" and "*ATM Device B*" in *ILMI Spec* are all either *ATM switch devices* or, at most, *router devices that belong to the same network of either switches or routers*. *ILMI Spec* does not, however, teach or suggest that "*ATM Device A*" is a switch of a switch network while "*ATM Device B*" is a router of a router network, much less that the router network is managed by a local area network management system while the switch

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network is managed by a wide area network management system this is separate from the local area network management system. This argument is persuasive.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to OLEG SURVILLO whose telephone number is (571)272-9691. The examiner can normally be reached on M-Th 9:30am - 7:00pm; F 10:00am - 6:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Philip Lee can be reached on 571-272-3967. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Examiner: Oleg Survillo

Phone: 571-272-9691

/Philip C Lee/
Acting Supervisory Patent
Examiner, Art Unit 2442